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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,894	01/31/2001	Junichi Akiyama	202594US2RD	1087

22850 7590 10/09/2002

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT PAPER NUMBER

2653

DATE MAILED: 10/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/772,894

Applicant(s)

AKIYAMA ET AL.

Examiner

Aristotelis M Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4,5,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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### DETAILED ACTION

Applicants' response of 7/26/02 has been considered with the following results.

1. Claims 17-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

#### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in-

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of

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each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

A claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

6. Claim 9 is rejected under 35 U.S.C. 112, fourth paragraph, for failing to further limit its parent claim. Claim 9 attempts to broaden the recording head of claim 1, by including a reproducing device and hence inherently broadens the independent parent claim.

7. Claims 1-3, 5 - 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Chen et al or Ueyanagi or Stovall et al each further considered with Kobayashi et al and Peale et al –Majors, Jr. et al.

The references to Chen et al, Ueyanagi or Stovall et al all disclosed thermal assisted  
✓ recording/reproducing heads in the magnetic recording/reproducing environment. Although there is both a magnetic pole and the thermal source, no specifics with respect to the size of any aperture and light-absorbing layer are noted.

The reference to Kobayashi et al discloses in the semiconductor laser environment the ability of having a light-absorbing layer with an appropriate aperture to affect a smaller spot in the recording environment – see the description in the section entitled "Background of the Invention".

It would have been obvious to modify the base system of either Chen et al, Ueyanagi or Stovall et al with the above teachings from Kobayashi et al, motivation is to reduce the spot size accordingly to permit an increase in recording density.

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With respect to the direction of polarization and which aperture dimension is larger than the other, no such direction of polarization reference is given. Nevertheless, the combined teachings from Peale et al – Majors, Jr. et al teach the ability of having both TE and TM modes of polarization, e.g. working in the near field environment of recording/reproducing devices – see especially the description in Stovall et al with respect to the background of the art.

Hence, It would have been obvious to modify the system of (Chen et al, Ueyanagi, or Stovall et al; – Kobayashi et al) with the additional teaching from Peale-Majors et al, motivation is to permit near field recording/reproducing upon an appropriate record medium.

With respect to the limitations of claim 2, the size of the spot/aperture meets these limitations.

With respect to 3, element 6 is a dielectric

The limitations of claims 5,6 are met in the above combination of references, as is the limitations of claims 7 (collector) and the dielectric element (6).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1-3 above, and further in view of Official notice.

The dielectric material has a thickness, but not within the range recited. The examiner takes  
— Official notice of the ability to vary the thickness of any layer, such thickness predicated on routine engineering criteria considerations such as cost, availability, each of manufacture, etc. and as such is considered merely an optimization of system parameters and obvious to one of ordinary skill in the art  
— especially since no unexpected results are seen to occur from such a selection.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 10 above, and further in view of Official notice

The ability of having a reflective layer on top of the recording layer in this environment is  
— considered well known and Official notice is taken.

It would have been obvious to modify the references with the additional ability of having a particular reflective layer on top of the recording layer, since such record media are known in this environment and no unexpected results are seen to occur from selection of such.

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- ✓ 10. Claims 12,13,15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al, Ueyanagi or Stovall et al.

These references met the above noted claims and the limitations contained therein.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 12 above, and further in view of Peale.

Peale teaches the particular type of semiconductor claimed as being well known in this environment.

It would have been obvious to modify the references as relied upon with respect to claim 12 and use the particular edge emitting semiconductor taught by the Peale reference, since selection between alternative types of semiconductor lasers is considered merely a selection between equivalent elements with no unexpected results to occur there from.

#### ***Conclusion***

Since copies of the references to Kobayashi et al, Peale, and Major, Jr. et al were provided in the copending application sn 09/749801, no copies of these references are being supplied with this OA.

The examiner has reviewed the submitted claims in the copending applications and considers that an obvious type double patenting situation COULD arise if the claims in sn 09/749801 are allowed, hence applicants' are cautioned to maintain a line of demarcation between all pending applications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

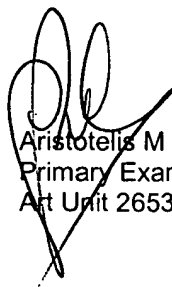
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

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Aristotelis M Psitos  
Primary Examiner  
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September 30, 2002